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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,665	12/30/2003	Qinghua Li	42P17465	9750

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EXAMINER

TRAN, THUY V

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

62

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/749,665	LI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on amendment submitted on 4/17/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9, 11-14, 16, 17, 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is a response to the Applicants' amendment submitted on 04/17/2006. In virtue of this amendment, claims 5 and 15 are canceled; and thus, claims 1-4, 6-14, and 16-22 are currently presented in the instant application.

#### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.*

2. Claims 3-4, 10, and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 3, the recitation "the second sectored antenna transmits the first signal delayed in phase from the first signal" in lines 2-3 renders the claim indefinite since it is confusingly not understood in terms of wording. Clarification is required.

With respect to claim 10, the recitation "the second sectored antenna transmits the first signal delayed in phase from the first signal" in lines 2-3 renders the claim indefinite since it is confusingly not understood in terms of wording. Clarification is required.

With respect to claim 18, the recitation "a second sectored antenna to transmit the first signal delayed from the first signal" in lines 3-4 renders the claim indefinite since it is confusingly not understood in terms of wording. Clarification is required.

Claims 19-20 are also rejected under 35 U.S.C. 112, second paragraph, since they are dependent on claim 18.

Art Unit: 2821

3. Claim 4 recites the limitation "the access point" in line 1. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 20 recites the limitation "the best mobile station signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

*The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).*

6. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Ofek et al. (Pub. No.: US 2004/0196834 A1).

With respect to claim 1, Ofek et al. discloses, in Figs. 1-3 and 29-30, a system comprising a mobile station [130] (see paragraph [0075], lines 4-5) that includes a first and second sectored antenna [160] to operate simultaneously in a transit mode (see paragraph [0076], lines 12-17), where a combination of the first and second sectored antennas [160] form a virtual omnidirectional antenna [2920] (see Fig. 29) selected in a Request To Send (RTS) and Clear To Send (CTS) exchange with an access point [110] (see paragraph [0023], lines 1-5).

With respect to claim 2, Ofek et al. inherently discloses that the first sectored antenna transmits a first tone (since it relates to transmitted data packet; see paragraph [0075], lines 7-9)

Art Unit: 2821

and the second sectored antenna transmits a second tone differing from the first tone (since it relates to transmitted data packet; see paragraph [0075], lines 7-9).

With respect to claim 3, as to the best interpretation, Ofek et al. discloses that the first sectored antenna transmits a first signal and the second sectored antenna transmits a signal delayed after the first signal or the first signal delayed in phase from the first signal as claimed (see paragraph [0020], lines 5-8).

With respect to claim 4, as to the best interpretation, Ofek et al. discloses that the mobile station further includes an omni-directional antenna (since each of the antenna sector having one omni-antenna; see paragraph [0281], lines 6-8).

***Allowable Subject Matter***

7. Claims 6-9, 11-14, 16-17, and 21-22 are allowed.

8. Claims 10 and 18-20 would be allowed following the allowability of claims 6 and 9 and 16, respectively, if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A communication network where a first omni-directional antenna is formed by a combination of multiple sectored antennas and the at least two omni-directional antenna use different tones, in combination with the remaining claimed limitations as called for in independent claim 6 (claims 7-9 and 11-14 are allowed since they are dependent on claim 6);

Art Unit: 2821

- A receiver system of an access point where at least one of the two omni-directional antennas is a combination of two complimentary placed sector antennas, in combination with the remaining claimed limitations as called for in independent claim 16 (claims 17 and 21-22 are allowed since they are dependent on claim 16).

***Remarks and conclusion***

10. Applicants' arguments with respect to amended claims 1-4 in the last two paragraphs at page 7 and in the first four paragraphs at page 8 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicants' arguments at pages 8-9 of the Amendment filed on 04/17/2006 with respect to claims 6-14 have been fully considered and are persuasive. The rejections of claims 6-14 over art have been withdrawn. Claims 6-9 and 11-14 are now allowed except claim 10 (see "Claims Rejections – 35 U.S.C. § 112" above for details).

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2821

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

07/09/2006



**THUY V. TRAN**  
**PRIMARY EXAMINER**